

Chapter 3 Problem Wrap-Up

Student Text Page

149

Suggested Timing

20 min

Tools

- graphing calculators
- grid paper
- road maps (optional)
- rulers

Related Resources

BLM 3.CP.1 Chapter 3 Problem
Wrap-Up Rubric
BLM G1 Grid Paper

Common Errors

- Some students may misinterpret the scale.
- R_x Direct students to Section 3.5 Investigate for review.
- Some students may have difficulty picturing how long a kilometre is.
- R_x Have students review Chapter 1, Section 1.2 and/or research for lengths of familiar objects on the Internet to help them visualize the length of a kilometre.

Summative Assessment

Use **BLM 3.CP.1 Chapter 3 Problem Wrap-Up Rubric** to assess students' performance.

Accommodations

Perceptual—Provide road maps for students to look at to help with interpreting and answering the questions.

Teaching Suggestions

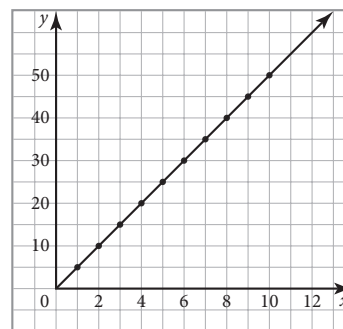
- Explain that map reading and determining distances is another application of everyday use of linear relations.
- Providing students with road maps to look at may help them interpret and answer the questions.
- Ensure that students understand how to interpret a scale on a map. Ask students to describe how long 1 km is.
- Some students may wish to use graphing technology to create a scatter plot and/or determine the equation of the linear relation.

Level 3 Sample Response

- a) Yes. Each centimetre on the map represents 5 km in reality.
- b) $y = 5x$, where x is distance on the map in centimetres and y is distance in reality in kilometres.

c)

x	y
1	5
2	10
3	15
4	20
5	25
6	30
7	35
8	40
9	45
10	50



- d) slope = rate of change = 5 km/cm; y -intercept = initial value = 0

Level 3 Notes

Look for the following:

- A clear justification of why the relationship is linear
- An accurately drawn and appropriately labelled graph
- An accurate table of values
- An adequate explanation of slope and y -intercept as they apply to the situation

What Distinguishes Level 2

At this level, look for the following:

- An acknowledgement that the relationship is linear with some justification
- A generally accurately drawn and appropriately labelled graph with some minor errors
- Some explanation of slope and y -intercept as they apply to the situation

What Distinguishes Level 4

At this level, look for the following:

- A clear, concise, and thorough justification of why the relationship is linear
- An accurately drawn and appropriately labelled graph; no table of values needed
- A clear, concise, and thorough explanation of slope and y-intercept as they apply to the situation